Deer
2008 Deer Harvest
Season Dates and Structure
Maine Deer hunters could hunt white-tailed deer for 85 days within the structure of five different hunting seasons during 2008. During the expanded archery season from September 6th to December 13th bowhunters could harvest an unlimited number of deer. The expanded archery season occurred in WMD 29, part of WMD 24 and 9 other locations that are mostly urban and in central or southern Maine. The special (statewide) archery season ran from October 2nd to October 31st (27 days). During this season, deer of either sex were legal. October 25th marked our seventh youth hunt, where hunters 10 to 15 years of age were eligible to hunt statewide for deer of either sex. The regular firearms season opened for Mainers on November 1st and for non-residents, the following Monday the 3rd. The firearms season ran until November 29th. Muzzleloaders had a 6-day hunt from December 1st to December 6th statewide, while an extended season continued from December 8th to December 13th in southern and central WMDs.

Doe Quotas, Any-Deer Permits, and Applicants
Every year we estimate the number of does that need to be harvested to achieve deer population objectives in each WMD. Also known as doe quotas, these desired doe harvests are calculated prior to the deer season and include the cumulative harvest of all does older than fawn from each deer hunting season. Since hunters may harvest a doe during both archery seasons and the youth deer season, doe harvests must be closely regulated during the firearms and muzzleloader season using any-deer and bonus any-deer permits. This ensures that the total harvest of does in any given WMD does not exceed the pre-set quota.

Generally, the number of does that can be harvested by hunting without decreasing the population increases following mild winters. Following severe winters we would expect increased mortality and adjust doe quotas accordingly. The effects of a severe winter may affect a deer population for more than one year; therefore, adjustments are also made to doe quotas for the 2nd season after a severe winter. During 2008, doe quotas in eastern, western, and northern WMDs were kept low to encourage deer population growth. In contrast, more liberal quotas were set in central and southern Maine WMDs to stabilize or reduce deer populations.

During 2008, doe quotas ranged from zero in 18 WMDs (districts 1-14, 18, 19, 27 and 28) to 1,045 in WMD 17. Among the 11 WMDs in which a doe harvest was desired, the doe quota totaled 6,080. Since any-deer permittees and archers can choose to kill a fawn instead of an adult doe (or a buck), we also anticipated a harvest of more than 3,579 fawns (both sexes) during the 2008 deer seasons.

Anywhere from 2 to 11 any-deer permits must be issued to achieve a registered harvest of one adult doe, this is referred to as an expansion factor. Some any-deer permittees may choose to take a buck or a fawn instead of an adult doe, while a great many others are not successful in killing a deer. The number of any-deer permits we allocate in a given district is a reflection of that WMDs doe quota. Consequently, WMDs that can sustain only limited doe mortality (e.g., northern, western, eastern WMDs) are allocated relatively few any-deer permits. In contrast, WMDs that can support higher doe mortality (and still meet management objectives) are allocated considerably more any-deer permits (central, southern, and coastal WMDs). Additionally the number of does harvested in our archery and youth hunts count towards our doe quotas and are accounted for in the any-deer permit allocation process. This tends to reduce the number of any-deer permits that can be issued to firearms hunters, in order to meet adult doe quotas. However, firearms season hunters typically account for ~85% of total deer hunting effort and harvest.

As deer populations have increased in central and southern Maine, it has become necessary to increase doe harvest rates in order to stabilize, or in some districts, to reduce deer populations. This requires substantial allocations of any-deer permits, sometimes at levels that exceed the number of applicants. Since it is important to meet doe harvest quotas, we have instituted bonus any-deer permits to be issued in WMDs that have insufficient applicants for available any-deer permits. When available any-deer permits exceed the number of applicants, all applicants receive an any-deer permit, and the excess permits are randomly distributed among these applicants as bonus any-deer permits. As with regular any-deer permits, bonus permits are WMD-specific. However, the holder of a bonus any-deer permit can take a second antlerless deer during any open season on deer. Hunters who possess only the any-deer permit can take one deer of either-sex during the regular firearms or muzzleloader season. Beginning in 2002, hunters could apply for an any-deer permit in up to 3 WMDs, in addition to designating one WMD for a bonus any-deer permit, if these become available.

Any-deer and bonus permits are allocated to qualified applicants in a random computer lottery. Both the application and the any-deer permits are free; bonus permits cost $12. During 2008, we issued 50,331 *any-deer*; no bonus any-deer permits were available. In addition 1,519 Superpack licenses were assigned. All combined, these 51,850 permits represent a -22% decrease in antlerless deer hunting opportunity compared to 2007 (66,275 permits). Permit allocations ranged from zero in the 18 WMDs with a zero doe quota, to 9,925 permits in WMD 17. The top 5 WMDs receiving any-deer permits on a per 100 mi^2 basis were: WMD 22 (1,581 permits per 100 mi^2), WMD 23 (1,271 permits), WMD 24 (1,003 permits), WMD 21 (982 permits), and WMD 20 (775 permits). Maine residents drew 39,578 permits (76%), landowners drew 8,421 permits (16%) nonresidents drew 3,579 any-deer permits (7%) and Superpack permittees won 272 permits (1%). Overall, 66,947 people applied for any-deer permits during

2008 (51,613 residents; 8,673 landowners; 5,088 nonresidents and 1,573 Superpack).

Statewide Statistics for 2008

Overall, 21,061 deer were registered during 2008, of which 1,853, 509, 1,065, 17,650 and 1,049 were taken during the expanded archery and regular archery, youth day, regular firearms, and muzzleloader seasons, respectively [Table 1]). The 2008 harvest was 7,823 less than in 2007 or a 27% decrease (28,884 deer vs 21,061). The 2007 harvest is below the average number of deer harvested over the 23 year history of any-deer permit regulations (i.e., 28,704).

Table 1. Sex and age composition of the 2008 deer harvest in Maine by season type and week, statewide

Season	Sex/Age Class				Total Deer	Total Antlerless Deer
	Adult		Fawn			
	Buck	Doe	Buck	Doe		
Archery	**635**	**834**	**178**	**206**	**1,853**	**1,218**
Expanded	404	621	132	154	1,311	907
October	231	213	46	52	542	311
Youth Day	**175**	**202**	**69**	**63**	**509**	**334**
Regular Firearms	**12,209**	**3,722**	**909**	**810**	**17,650**	**5,441**
Opening Saturday	1,619	462	120	110	2,311	692
Nov 3-Nov 8	2,889	776	197	176	4,038	1,149
November 10-15	2,746	626	178	146	3,696	950
November 17-22	2,635	697	152	142	3,626	991
November 24-29	2,320	1,161	262	236	3,979	1,659
Muzzleloader	**530**	**390**	**51**	**78**	**1,049**	**519**
Dec 1-6	273	123	17	23	436	163
December 8-13	257	267	34	55	613	356
Total	**13,549**	**5,148**	**1,207**	**1,157**	**21,061**	**7,512**

*Records corrected for season omissions
Sex/age data were corrected for errors in the deer registrations

Buck Harvest

The statewide harvest of antlered bucks (13,564) in 2008 is a 16% decrease from the previous year (16,103, Table 2). The top 5 buck-producing (per mi^2 basis) WMDs in 2007 were (in descending order), districts 24, 21, 22, 23, and 17 (excluding 29), all in central and southern Maine. Among the antlered bucks taken in 2008, *roughly* 5,019 (37%) were 1 ½ year-olds (yearlings) sporting their first set of antlers, while more than 2,035 (25%) were mature bucks (4 ½ to 15 ½ years old). Male fawns are reported with antlerless deer. The higher percentage of mature bucks and significant drop in yearlings in the 2008 statewide harvest reflected high winter fawn losses following the catastrophic winter of 2007-08. Maine is nationally recognized for producing trophy bucks (age 4½ and older). This is possible because Maine's bucks are subjected to relatively light hunting pressure compared to other states. In Maine, a healthy number of bucks annually survive to older (mature) age classes. In more heavily hunted states,

yearling bucks comprise a much higher proportion of the overall harvest and fewer bucks live to maturity. This effect combined with regulated doe harvest coincides with the principles of "Quality Deer Management" that many states desire to achieve. In Maine, deer populations subjected to hunting are held well below carrying capacity, allowing individual deer to obtain adequate nutrition and reproduction. Harvests are closely regulated, resulting in favorable buck-to-doe ratios. Overall, the statewide yearling buck frequency in the harvest for 2008 was 37% with average buck weights around 115 pounds, signifying relatively high buck escapement, good body condition and ample nutrition. Finally, hunting effort on bucks remains light enough to allow a significant number of bucks to attain maturity, even old age (4 ½ to 15 ½ years). In 2008, 349 bucks were entered in the "Biggest Bucks in Maine Club" which requires a dressed weight of at least 200 pounds.

Table 2. Sex and age composition of the 2008 deer harvest in Maine by Wildlife Management District[1].

Wildlife Management District	Adult		Fawn		Total Antlerless Deer	Total All Deer
	Buck	Doe	Buck	Doe		
1	81	0	1	1	2	83
2	43	3	1	0	4	47
3	57	4	1	1	6	63
4	73	2	0	0	2	75
5	129	1	1	0	2	131
6	198	23	9	6	38	236
7	380	13	5	2	20	400
8	250	4	2	0	6	256
9	79	2	1	0	3	82
10	86	3	1	0	4	90
11	384	22	8	8	38	422
12	487	27	9	6	42	529
13	351	28	11	6	45	396
14	335	22	11	7	40	375
15	929	434	77	78	589	1,518
16	890	387	94	89	570	1,460
17	1,676	813	186	187	1,186	2,862
18	266	16	3	4	23	289
19	141	3	3	0	6	147
20	802	400	107	97	604	1,406
21	926	511	122	116	749	1,675
22	800	515	118	107	740	1,540
23	1,152	626	149	160	935	2,087
24	457	346	88	78	512	969
25	728	318	52	55	425	1,153
26	1,029	327	79	79	485	1,514
27	314	22	6	3	31	345
28	205	10	0	0	10	215
29	316	272	46	62	380	696
Statewide	13,564	5,154	1,191	1,152	7,497	21,061

[1]Sex/age data were corrected for errors in the deer registrations

Antlerless Deer Harvest

The magnitude of Maine's harvest of does and fawns depends on the number and success rate of bowhunters and youth day participants, the number of any-deer permits issued to firearms deer hunters, and also on hunting conditions (e.g., availability of tracking snow). The statewide harvest of adult (older than fawn) does during 2008 was 5,154, 18% below the pre-set quota (~6,280 adult does). It is unclear whether this decrease was due to the selection of bucks over does, decreased interest in harvesting an adult given a severe winter, or availability of adult does.

During 2008, any-deer permittees also tagged 2,827 fawns, while archers and youth day hunters tagged 516 young of the year. Overall, 7,497 antlerless deer were registered by hunters during the 2008 season.

Harvest by Season and Week

Of the five separate deer hunting seasons, Maine's regular firearms season attracts the most hunters (about 162,000), and accounts for the greatest share of the total harvest. In 2008, app. 90% of the total deer harvest occurred during the 4-week firearms deer season (Table 3).

Overall archery was down 17%. Both October-regular archers and expanded archery participants decreased their success over 2007 by 23 and 14% respectively. Again the harsh winter of 07-08 led to decreased survival across all cohorts, especially fawns. In addition adult does that over-wintered in such conditions will give birth to fawns with lower weights and a poor chance at surviving the first critical weeks. A weaker fawn crop was represented in the archers harvest with antlerless deer legal game throughout the seasons. While weather and good mast crops can affect deer vulnerability to harvest and/or hunter success, most likely increased winter mortality and decreased survival rates led to less availability for the fall harvest.

Typically the muzzleloader harvest comprises a small proportion of the overall harvest (7% of the total deer harvest in 2007), in 2008 muzzleloader harvest comprised 5% which relative to past muzzleloaders seasons was fairly good. Good tracking conditions during the season may have improved conditions despite an overall tough season.

We are uncertain how many of the 14,444 youth license holders participated in the seventh youth day on Saturday, October 25th. This was an either-sex hunt, and youth hunters capitalized on this as evident by the total antlerless harvest making up 66% of the 509 deer harvested. The addition of the youth day to our deer hunting season and associated antlerless harvest is accounted for in our deer management objectives and any-deer permit allocation by adjusting permit levels for overachieved doe harvests.

Harvest By Hunter Residency

Among deer hunters, Maine residents outnumbered nonresidents by more than 9 to 1. Not surprisingly, residents tagged 91% (19,100 deer) of the total harvest during 2008 (Table 3). Among seasons, the proportion of the harvest registered by Maine residents was highest extended muzzleloader (98%), followed by Youth Day (97%), statewide muzzleloader (96%), regular archery (94%), and expanded archery (91%). During the past decade, Maine residents' share of the deer kill has been increasing. Formerly, residents consistently accounted for about 80% of Maine's deer harvest. Evidently, nonresident participation in deer hunting has declined over the past 10 – 15 years. This is particularly apparent among Canadians (primarily from Quebec); sales of alien big game licenses have steadily dropped from 2,900 to about 250 since 1990. Despite some declines in non-residents, Maine deer hunting still attracts hunters from over 40 states and Canadian provinces annually.

Table 3. Deer registrations by season type and residence of successful hunters, statewide in Maine during 2008.

	Deer Registrations By:			Percent by
Season & Week	Residents	Nonresidents	Total	Residents
Archery	**1,709**	**144**	**1,853**	**92**
Expanded	1,197	114	1,311	91
October	512	30	542	94
Youth Day	**493**	**16**	**509**	**97**
Regular Firearms	**15,880**	**1,770**	**17,650**	**90**
Opening Saturday	2,311	0	2,311	100
Nov 3-Nov 8	3,570	468	4,038	88
November 10-15	3,271	425	3,696	89
November 17-22	3,085	541	3,626	85
November 24-29	3,643	336	3,979	92
Muzzleloader	**1,018**	**31**	**1,049**	**97**
Dec 1-6	417	19	436	96
December 8-13	601	12	613	98
Total	**19,100**	**1,961**	**21,061**	**91**

Regional differences occurred in the distribution of the harvest by residents and visitors to Maine. In the more populous central and southern WMDs, most successful deer hunters were residents. In 2008 non-residents had a lower than normal take with WMD 8 along the Quebec border accounting for the largest share in a WMD of 48% (primarily Canadians from Quebec). At the other end of the spectrum, 99% of the deer killed in heavily populated WMD 24 (south-coastal Maine) and WMD 27 (Downeast coast) were registered by Maine residents (Table 4).

Table 4. Deer registrations by Wildlife Management District and hunter residence, 2008.

Wildlife Management	Deer Registered By:				
	Residents		Nonresidents		
District	Number	Percent	Number	Percent	Total
1	53	64	30	36	83

2	31	66	16	34	47
3	59	94	4	6	63
4	44	59	31	41	75
5	71	54	60	46	131
6	226	96	10	4	236
7	235	59	164	41	399
8	134	52	122	48	256
9	53	65	29	35	82
10	64	71	26	29	90
11	342	81	80	19	422
12	473	89	56	11	529
13	343	87	53	13	396
14	258	69	117	31	375
15	1395	92	125	8	1,520
16	1383	95	77	5	1,460
17	2532	88	330	12	2,862
18	250	86	41	14	291
19	123	84	24	16	147
20	1330	95	77	5	1,407
21	1638	98	36	2	1,674
22	1512	98	28	2	1,540
23	1866	90	217	10	2,083
24	957	99	11	1	968
25	1123	97	30	3	1,153
26	1453	96	62	4	1,515
27	342	99	3	1	345
28	199	93	16	7	215
29	648	93	49	7	697
Statewide	19,137	91	1,923	9	21,061

*Not adjusted for sex and age

Hunter Participation and Success Rate

During 2008, 202,401 licenses that permit deer hunting were sold in Maine; of these 85% were bought by residents. License sales in 2008 changed little from sales recorded in 2007 (204,129). Total hunting license sales (209,362) have not changed significantly over the last 10 years (avg=209,751). Not all hunters who purchase big game hunting licenses actually pursue deer. According to past surveys (1970 to 1984, and 1988 and 1996), about 15% of these license buyers typically chose not to hunt deer. When these non-participants are subtracted from total sales of deer hunting licenses, the estimated number of hunters who actually pursued deer in Maine during 2008 was approximately 172,041. Hunter density, therefore, averaged about six per square mile, statewide, and these hunters expended an estimated 1.08 million hunter-days effort pursuing deer over the course of our 85-day hunting seasons.

Hunting opportunities and associated pressure has changed over time due to additional season and methods. Prior to 1981, there was no separate black powder season, no youth hunt, no expanded archery season (just the October hunt), and we limited the firearm deer season to 3 weeks in the southern half of

the state. Overall, we offered only 48 days of hunting opportunity in the late 1970s vs. 85 days in 2008. Hunter effort is cumulative; adding new deer seasons and more hunting days results in higher overall pressure on the deer herd. This fact has consequences regarding maintenance of trophy buck availability, and it impacts the number of any-deer permits we can allocate.

Deer hunting pressure varies between northern and eastern WMDs vs. central and southern WMDs. With the advent of expanded archery and the any-deer permit system hunters have the ability to pursue deer under different circumstances i.e., urban-suburban vs. remote, big woods hunting. The distribution of deer numbers and pattern of human development has changed over the last 30 years and these patterns strongly shape where hunters hunt and their individual experiences.

In its 12th year, the expanded archery season attracted just under 10,000 participants (over 90% residents). During the first three years, hunter participation in the expanded archery season had doubled each year; since 2000, participation seems to have slightly declined. As noted earlier, this season is limited to WMDs 24, 29 (former part of 30), and 9 smaller sites in southern Maine.

In 2008, archery license sales (14,011) declined by 6% from 2007 sales. Over the past 25 years, sales of archery licenses have nearly quadrupled, reflecting a strong trend toward greater participation in the sport of bowhunting for deer. Over the past decade, the Department has increasingly relied on bowhunters to harvest deer in parts of Maine where residential sprawl and other development preclude deer population control using firearms hunting. This transition from purely recreational to management-oriented bowhunting is evident from harvest records. Archery harvests have increased from less than 100 deer in the 1970s to 1,853 deer in 2008.

Compared to the regular firearms season, which attracts over 170,000 participants, relatively few deer hunters currently participate in Maine's late black powder deer season. Still, the sale of special muzzleloading season permits has increased substantially over the last 10 years to 18,094 permits in 2008. Late season hunting and improvements and innovations in muzzleloaders may explain the increased interest and participation in muzzleloader season effort over the last few years. Since its inception in 1981, the black powder season has increased steadily in the number of participants. In its first year (1981), only 415 hunters purchased a muzzleloading permit. The number of deer registered during Maine's muzzleloader season has grown from 7 in 1981 to 1,049 in 2008. This hunting method is expected to continue to grow in popularity.

Deer hunting success in Maine during the regular firearms season was estimated at 8% 2008. The success rate among hunters who drew an any-deer permit (range 20-48%) is typically higher than among hunters who were restricted to

"bucks-only" during the regular firearms season (range 7-22%). Since any-deer permittees could harvest either a doe, fawn, or buck, they would be expected to achieve a higher success rate. We expect success rates among bow hunters to differ markedly between the expanded archery season and the statewide October archery season as well. Deer are very abundant in much of the expanded archery hunt area. This, coupled with no limit on antlerless deer, typically account for the greater degree of success hunters enjoyed during the expanded archery season.

The overall success rate among deer hunters varies among WMDs and is influenced by the number of any-deer permits we issue, availability of deer, hunter pressure, weather and hunting method. Success rates are typically lowest in northern Maine's WMDs (3 to 10%) and above average in central and southern WMDs (15 to 30% success rate).

Maine's Deer Population and Strategic Plan

Since the early 1970s, our deer management program has been guided by a strategic plan developed with considerable public input. The strategic plan is revised every 10 to 15 years to address changes in public attitudes or changing biological factors affecting deer.

The deer plan was most recently updated in 2001; attainment of our new objectives will drive our harvest strategies from 2002 through 2017. The previous deer plan (1985 – 2001) called for increasing deer populations in all parts of the state that are accessible to hunting. We desired deer populations that were about one-half the maximum number of deer the habitat could support. Accomplishing these population objectives called for carefully regulating doe harvests to encourage herd growth, and also managing deer on more local scales.

Over the last 3 decades changes in habitat conditions, hunting participation, and land ownership have provided both challenges and opportunities for deer management in Maine. By harvesting does conservatively, and by taking advantage of mild winters when they occurred, deer populations have increased since the harsh winters of the 1970's from roughly 160,000 to nearly 249,000 wintering deer. Regionally there has been much variation in achieving district population objectives. Management strategies have been most successful in southern and central Maine where winters generally remained favorable, overall habitat was productive, and deer populations were highly responsive to changes in doe harvest rate. In contrast, we have been largely unsuccessful in getting deer populations to increase in the big woods sections of northern, eastern, and western Maine during the past 20 years despite very conservative doe harvests. Reasons for our failure to turn populations around in this half of the state include a progressive loss in the quality and quantity of wintering habitat, frequent severe winters, relatively high natural losses of adult deer, and diminished recruitment of young deer.

Deer Wintering Habitat

In northern and eastern Maine, our ability to increase the abundance of deer populations must involve increasing and restoring some of the deer wintering habitat that was lost during the past 3 decades. To that end, the Department has set a long-term objective to increase the amount and quality of deer wintering habitat in northern and eastern WMDs. Recently public interest and awareness has been raised concerning the current condition of northern yards. Revitalizing efforts to conserve wintering habitat by negotiating long-term management plans, conservation easements, or other conservation measures with large and small landowners will hopefully expand the amount of available wintering habitat and ensure protection of deer during restrictive winter conditions. The department has also been working with the large industrial landowners and Small Woodlot Owners to create a Best Management Practices Guide for managing Deer Wintering Areas. It is the hope that this new effort will maintain and increase the quality and amount of deer wintering areas over the next few years.

Until we succeed at increasing the wintering habitat base, we must avoid overpopulating existing winter deeryards. To this end short-term objectives were created to maintain deer in northern and eastern Maine at no more than 50% of the capacity of the existing deer wintering habitat. All things considered, antlerless deer harvests in eastern, Western Mountain, and northern Maine WMDs will remain limited until over winter survival and productivity increase.

By influencing mortality and fawn production, winter severity exerts a powerful influence on deer populations in Maine. The very severe winter of 2007-08 caused the statewide herd to plummet ~17% from 240,000 to fewer than 200,000 deer. The 2007-08' winter was long and characterized by deep snow. Average yarding days for deer across the state were 140 days (the longest period of time for which we monitor winter conditions). Research has demonstrated that yarding periods longer than 100 days bring on a precipitous drop in fawns survival. The length of the 2008 winter not only hampered population growth across the state, but heavily impacted already low populations in the northern, western and Moosehead regions. The impact of such a tremendous winter will be felt for sometime.

Prospects for the 2009 Deer Season

In 2009, we will offer 5 separate deer hunting seasons in Maine. The expanded archery season will open September 12th and run until to December 12th (79 days). This season is limited to WMDs 24 and 29 (formerly WMD 30 Northeast to Vinalhaven), as well as 9 other locations, primarily in residential-suburban sprawl areas with firearm discharge ordinances. Hunters with a valid archery license may purchase multiple antlerless permits for $12.00 each and one buck permit for $32.00. This amount of bowhunting opportunity is aimed at increasing the harvest of does and fawns in order to meet population density objectives for

areas that are difficult to access for hunting. In the expanded archery zone, deer populations can only be reduced if the limited number of archers that can gain access to huntable land are each able to harvest substantial numbers of deer.

The regular (statewide) archery season will run from October 1 - October 30 (26 days). Youth day will be Saturday, October 24th, and is reserved for hunters between 10 and 15 years old, who are accompanied by a licensed adult (who is not allowed to carry a hunting weapon). The 25-day regular firearms season opens for Maine residents on Saturday, October 31st, and for nonresidents the following Monday. This season ends the Saturday following Thanksgiving (November 28th). Finally, the muzzleloader season will begin in all WMDs on November 30th, but will end on December 6th (6 days) in WMDs 1 – 11, 14, 19, 27 and 28. Elsewhere, the muzzleloader season will continue until December 12th (12 days). Crossbow Archery season will coincide with modern firearms.

Availability of any-deer permits among our 29 WMDs is directly related to our deer management objectives. Very conservative doe harvests are required in eastern and northern WMDs where we are trying to increase deer densities. In contrast, does must be more heavily harvested in WMDs where current objectives are to stabilize deer populations to the 15 or 20 deer / mi^2. abundance targets we set in the strategic plan.

To accomplish deer management objectives in 2009, we have set doe harvest quotas ranging from zero to 798 among our 29 WMDs. Totaling 4,787 statewide, the 2009 doe quota is 7% below the doe harvest we achieved in 2008. This reduced doe quota from 2008, reflects the tremendous impact the harsh winter of 2008 had on deer populations throughout the state and significant winter mortality. A total of 45,385 any-deer permits will be issued statewide ranging from 600 permits in WMD 29 to 7,980 in WMD 22. WMDs 1-14, 18, 19, 27 and 28 will not have any permits allocated.

Again this year, applicants may select up to 3 WMDs to be entered in the any-deer lottery. Hunters who live (and normally hunt) in a part of the state with limited antlerless deer hunting opportunity, now have a better chance to be drawn for an any-deer permit in districts with high permit allocations, but insufficient applicants. **Since any-deer permits are WMD-specific, only hunters who are willing to travel to other WMDs are encouraged to select 2nd or 3rd choices for the any-deer permit lottery.** Applicants may also select one WMD for entry into the bonus any-deer lottery, should that lottery becomes necessary.

The allocation of 45,385 any-deer permits, along with the archery and youth seasons, should result in the statewide harvest of roughly 4,787 does and an additional 2,139 fawns in 2009. Antlered buck harvests should approximate 11,460 about a 16% decrease from the 2008 buck kill of 13,564. A second tough winter continued to impact deer survival, thereby reducing permit allocations and

the overall predicted harvest. If normal hunting conditions and hunter effort take place the statewide deer harvest in Maine should be in the vicinity of 18,976 deer. This would be lower than the 20-year average harvest since the any-deer permit regulations were put into effect (28,704) and represent the lowest harvest since 1971.

Chronic Wasting Disease

Chronic Wasting Disease (CWD) is a fatal disease of the nervous system of deer, elk, and moose. The disease belongs to a family of diseases known as transmissible spongiform encephalopathies (TSEs). Other TSEs include scrapie in sheep, BSE or "mad cow disease" in cattle, TME in captive mink, TFE in cats, and Creutzfeldt-Jakob disease (CJD) and variant CJD in humans. Although similar in some respects, there is no known causal relationship between chronic wasting disease and any other TSE of animals or people. To date, BSE, TFE, and variant CJD have not been identified in North America.

Current research has identified an infectious, abnormally-shaped protein called a prion that causes certain other brain proteins to change to a diseased form. CWD prions accumulate in the brain and other nervous tissues, where they physically damage affected nerve cells. Although the disease agent mainly targets nervous tissue, it also occurs in most tissues of an infected animal, including muscle tissue. Infected individuals shed CWD prions in urine, feces, saliva, and eye fluids.

CWD transmission among deer and elk are not well understood. CWD prions are persistent and are not easily destroyed by environmental factors, heat, or disinfection. Therefore, CWD prions can remain in contaminated environments for many years. Scientists are not sure if these prions can be passed from mother to offspring during pregnancy. In most cases, CWD prions are most likely ingested by susceptible animals and transmitted by direct contact with infected individuals, or by contact with contaminated soil, leaves, bedding, feed, or water. Practices that concentrate deer and elk in close proximity, such as supplemental feeding and raising deer or elk in fenced enclosures may increase the potential spread of the disease. In addition, sites where CWD-infected cervids have died (or were placed) may become contaminated as tissues decompose. Whether or not predators and scavengers can transmit CWD prions after consuming infectious parts of CWD-infected deer or elk is currently being researched. Once established in an area, CWD may be spread when infected wild deer travel to new locations, or when infected captive/farmed cervids are transported to other farms. Contact between wild and fenced cervids along fence lines can spread CWD in either direction.

Chronic wasting disease is a slowly progressive disease; signs of sickness are usually not seen for 5 to 36 months after the disease agent enters the deer or elk. Individuals showing symptoms of CWD tend to be 18 months of age or older. Current research also suggests that in areas where CWD is found mature

bucks have demonstrated a greater prevalence of the disease due to behavioral characteristics and therefore may be a greater factor in transmission. CWD damages the brain of infected animals, causing them to display unusual behavior, lose bodily functions, become emaciated, and inevitably die within 1 to 12 months after symptoms of the illness first appear. Clinical signs identified in captive/farmed deer and elk include excessive drooling and thirst, frequent urination, sluggish behavior, isolation from herd, teeth grinding, holding the head in a lowered position, and drooping ears. It should be noted that some of these symptoms can be seen after a very severe winter in Maine, when deer may appear very thin and weak. Although rare in cervids, rabies may produce some symptoms in common with CWD, such as erratic behavior, and drooling.

To date, chronic wasting disease has been found in mule deer, white-tailed deer, moose, and elk. Based upon molecular similarities, CWD can probably be transmitted to all species in the deer family (cervids), including red deer, fallow deer, sika deer, and caribou. There is no scientific evidence that CWD can be naturally transmitted to species outside the deer family, including cattle, horses, sheep, goats, or swine.

There is currently no scientific evidence that CWD can infect humans. Nevertheless, public health officials recommend avoiding exposure to the CWD disease agents. . Recently, CWD prions were found in the muscle tissue of infected mule deer. Therefore, muscle tissue from an infected animal should be considered a potential source of prion infectivity.

CWD is diagnosed from hunter harvested or road-killed animals. Samples of brain and/or lymph tissue from suspect deer are examined for the presence of CWD prions or for the damage CWD prions cause in brain tissues, using laboratory techniques called immunohistochemistry and histopathology, respectively.

Currently, CWD is known to infect free-ranging deer and elk in portions of Colorado, Illinois, Kansas, Nebraska, New Mexico, New York, South Dakota, Utah, West Virginia, Wisconsin, Wyoming and both Alberta and Saskatchewan, Canada. In addition, CWD has been found in captive/farmed elk or white-tailed deer herds in Colorado, Kansas, Minnesota, Montana, Nebraska, New York, Oklahoma, South Dakota, Wisconsin, Wyoming and Alberta and Saskatchewan, Canada. Free-ranging moose have been detected with CWD in Colorado.

There is no evidence that CWD is present in wild white-tailed deer and moose, or in captive/farmed deer (red, sika, fallow) or elk in Maine. Each year, Department of Inland Fisheries and Wildlife (DIFW) biologists examine 6,000 to 8,000 hunter-killed deer and 2,000 to 3,000 moose for management purposes. While conducting other fieldwork, wildlife biologists observe hundreds of live deer during a typical year. In addition, biologists respond to hunters who contact us when they kill apparently ill or injured individuals. To date, DIFW biologists have

not observed symptoms consistent with CWD in Maine.

No sick animals that may fit the clinical profile for CWD have ever been brought to the attention of the Department of Agriculture (DOA) or private veterinarians from among Maine's licensed deer farms. Since autumn of 2001, more than 1,900 farmed-raised elk and deer slaughtered in Maine have been tested for CWD. To date, all tests have been negative for CWD.

In a 1999 cooperative study, DIFW, DOA, and Center for Disease Control officials tested 299 hunter-killed white-tailed deer from the western mountains and foothills of Maine. All deer tested negative for CWD. In 2002, DIFW biologists tested 831 hunter-killed deer from all areas of the state. All deer tested negative for CWD. Similar negative results were obtained from 810 deer in 2003, 756 deer in 2004, 819 deer in 2005, 909 deer in 2006, 848 in 2007and 783 in 2008.

In theory, prions from CWD-infected deer could be present in commercial deer and elk foods, if they were formulated using rendering products (e.g., meat and bone meal or MBM) containing CWD-infected slaughter and processing wastes. In 1997, the U.S. Food and Drug Administration (FDA) placed a total ban on the use of MBM from cattle, sheep, goats, and cervids as a component in commercial feeds for ruminants (including wild and domestic deer and elk). Assuming all feed companies are complying with the FDA ban, commercial feeds commonly used to supplement the diets of captive/farmed or wild cervids would currently be free of CWD infectivity. We don't know, however, if MBM from CWD-infected deer or elk was ever incorporated into commercial ruminant feeds distributed in Maine prior to 1997. Nor do we know if commercial feeds currently formulated for non-ruminants (horse, swine, poultry, dog, and cat) sometimes contain MBM from CWD-infected deer or elk. If these products are used only commercially available products formulated specifically for ruminants (deer, cattle, sheep, goats), or whole grains (e.g. oats, corn) without supplements are recommended.

If supplemental feeds are free from CWD infectivity, the practice of feeding deer in winter cannot cause a CWD outbreak. However, the close contact and crowding typically seen among deer at winter feeding sites can greatly accelerate the spread of infectious diseases like CWD, if an outbreak occurs from other sources. Because of the long incubation period for CWD, an outbreak among white-tailed deer at feeding sites may spread to a large area long before clinically-ill individuals are observed. This would greatly hamper efforts to control the disease. **Discontinuing the practice of winter feeding of deer is a critical step in reducing the potential for the spread of CWD.** If you feed wild deer in Maine, please consider phasing out of the practice as soon as possible, as a disease prevention measure.

In most cases, the urine used to formulate commercial "doe-in-heat" or other

buck lures is collected from captive deer or elk farms. If CWD prions are passed in the urine of CWD-infected deer and elk, the infective agent may be present in these lures. If present, then CWD prions may inadvertently be placed where susceptible Maine deer may contact and ingest them. Depending upon how the lure is handled, CWD contaminated deer lures could also be a source of exposure (and inadvertent ingestion) by people. In addition researchers are demonstrating that once prions are in the environment they may contaminate the area by remaining in the soils for years to come. At this time, we do not know whether any captive/farmed deer or elk used by the lure industry have ever contracted CWD. To date, deer lures are not being checked for the presence of CWD prions. **Until more is known about whether commercial deer lures pose a realistic risk of spreading CWD, we recommend that hunters use caution in spreading urine-based lures in the environment, and avoid placing the lures on their clothing or skin.** Avoid placing deer lures on the ground or on vegetation where deer can reach them. Deer lures can be safely placed above deer height, allowing air circulation to disperse the scent. **We would also strongly recommend using synthetic, non-urine based lures that have become available on the market until further research can show that deer urine does not pose a risk of containing infectious prions.**

Where it occurs, CWD poses serious problems for wildlife managers, and the implications for free-ranging deer are significant. If it emerges in Maine, CWD could seriously reduce infected deer populations by lowering adult survival and de-stabilizing populations. Monitoring and control of CWD is extremely costly and would divert already scarce funding and staff resources away from other much-needed programs. Public concerns and perceptions about human health risks associated with all TSEs may erode hunter willingness to harvest deer, leading to unwanted population growth in areas that remained CWD-free. Major reductions in deer hunting would adversely affect Maine's economy, since deer hunting currently contributes more than $200 million to the economy of our rural state. Perceptions about the safety of farmed venison as human food could cause the collapse of Maine's $1 million deer farming industry. Preventing the arrival of CWD in Maine is an urgent state priority. The Departments of Agriculture, Human Services, and Inland Fisheries and Wildlife are coordinating efforts to prevent CWD from entering the state. They are also working closely with other states, the federal government, and private organizations on various CWD-related topics.

The Maine Department of Agriculture has banned imports of live cervids from other states until a fail-safe importation system can be implemented. The Department of Inland Fisheries and Wildlife has issued advisories covering:

1. Safe ways to import hunter-killed deer or elk from states harboring CWD;
2. Cautious use and placement of urine-based deer hunting lures, while the safety of these products can be evaluated;
3. Voluntarily modifying or ending the widespread practice of feeding deer in

winter, as a preventive measure.

If you plan to hunt deer, moose or elk in a state/province known or suspected to harbor CWD (see above for list of states and provinces), there are some commonsense precautions you should take to avoid handling, transporting, or consuming potentially CWD-infected specimens. To prevent the introduction of CWD into Maine it is now illegal for hunters who travel to any other states and provinces to hunt deer, elk, or moose to transport any carcass parts that pose a high risk of containing CWD prions. Hunters may return to Maine only with boned-out meat, hardened antlers (with or without skull caps), hides without the head portion, and finished taxidermy mounts; if still attached, skull caps should be cleaned free of brain and other tissues.

At this time, no state or province can claim to be free of CWD - - too little monitoring has been conducted to realistically evaluate CWD status. Accordingly, this regulation against importing potentially high-risk carcass parts applies to wild deer, moose or elk taken in any state and province outside Maine, and to cervids killed in commercial hunting preserves everywhere.

More detailed information about CWD can be found on the Department website: **www.mefishwildlife.com**, or contact us at (207) 287-8000. **Deer research and management is supported primarily by hunting license and permit revenues and from federal excise taxes on sporting arms, handguns, ammunition, and archery equipment (Pittman-Robertson Fund).**